



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,697	08/31/2000	Duncan M. Kitchen	ITL.0406US	3821

21906 7590 01/18/2007
TROP PRUNER & HU, PC
1616 S. VOSS ROAD, SUITE 750
HOUSTON, TX 77057-2631

EXAMINER

NGUYEN, LEE

ART UNIT	PAPER NUMBER
----------	--------------

2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/652,697

Applicant(s)

KITCHIN, DUNCAN M.

Examiner

LEE NGUYEN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-14 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,4-7,9-14,31-42 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/2006 has been entered.

Claims 3 and 15-30 have been canceled. Claims 1-2, 4-14, 31-42 remain in prosecution.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said second transceiver" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9, 12 and 31-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Mansfield (US 6,704,346).

Regarding claim 1, Mansfield teaches a method comprising: determining a characteristic of a local noise source (slots 3, 6 in col. 11, lines 47-54, Table 2C, and interference in col. 9, lines 46-50) affecting a first transceiver (see Bluetooth (BT) device in col. 11, line 42); determining the length of an intended transmission (see adapted packet length, col. 12, line 30); using said characteristic and said length to predict a time when the effect of the local noise source would reduce for sufficient time for said intended transmission (col. 11, line 39 through col. 12, lines 40, see slots 1-2, 4-5, 7 and table 2C).

Regarding claims 9 and 12, the claims are interpreted and rejected for the same reason as set forth in claim 1.

Art Unit: 2618

Regarding claims 31, 35, and 39, Mansfield also teaches identifying information about the transmission slots of said local noise source (slots 3, 6 as bad slots, table 2C and col. 11, lines 50-54).

Regarding claims 32, 36 and 40, Mansfield further teaches determining the start point sequence of slots (see slots ahead 1-7 in table 2C).

Regarding claims 33, 37 and 41, Mansfield also teaches determining a particular slot is used for transmitting information (slots 3, 6 as bad slots, table 2C and col. 11, lines 50-54).

Regarding claims 34, 38 and 42, Mansfield also teaches using information about whether a slot is occupied to predict a time period of less noise from said noise source (slots 3 and 6 are bad so using slots 1-2, 4-5 and 7, see table 2C, col. 11, lines 50-54).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 6-7, 9-10, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson (US 6,374,082) in view of Mansfield (US 6,704,346).

Regarding claim 1, Carlson teaches a method comprising: determining a characteristic of a local noise source affecting a first transceiver (col. 3, lines 38-47, periodic noise 10 and col. 4, lines 26-28); using said characteristic to predict a time when the effect of the local noise source would reduce (col. 3, lines 41-43, col. 4, lines 11-13, predicted quiescent period 11). Carlson does not explicitly teaches in figure 4 that times $t(1)-t(2)$ and $t(3)-t(4)$ also contain the length of data packets to be transmitted so that the transmitted data will not be interfere with the noise source windows $t(0)-t(1)$ and $t(2)-t(3)$ in figure 1. In order to solve this problem, Mansfield teaches a method comprising: determining a characteristic of a local noise source (slots 3, 6 in col. 11, lines 47-54, Table 2C, and interference in col. 9, lines 46-50) affecting a first transceiver (see Bluetooth (BT) device in col. 11, line 42); determining the length of an intended transmission (see adapted packet length, col. 12, line 30); using said characteristic and said length to predict a time when the effect of the local noise source would reduce for sufficient time for said intended transmission (col. 11, line 39 through col. 12, lines 40, see slots 1-2, 4-5, 7 and table 2C). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Mansfield with Carlson in order to improve RF interference characteristics.

Regarding claim 2, Carlson as modified also teaches using the characteristic at the second transceiver or network node to control wireless information to the first transceiver or first node (col. 4, lines 10-13 of Carlson).

Regarding claims 6-7, Carlson teaches that the periodic noise 10 is detected and identified using either an AM demodulator or RSSI to generate a synchronization signal (col. 3, lines 42-47 and col. 4, line 10-11). Therefore, if using the RSSI, the AM demodulator is not used.

Regarding claims 9 and 12, the claims are interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 10, Carlson as modified teaches transmission of information during the quiescent period; therefore, it also reduces the probability of interference between said transmission and the local noise source.

Regarding claim 13, the transceiver 12 of Carlson is also a network node.

Regarding claim 14, Carlson also teaches the RSSI circuit (col. 3, line 45).

Claims 4-5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson in view of Mansfield as applied to claims 1 and 9 above, and further in view of Hess et al. (US 5,649,303).

Regarding claims 4 and 11, Carlson as modified fails to teach determining a probability of a transmission occurring at a given time from the noise source. In order to mitigate interference, Hess teaches determining a probability of a transmission

Art Unit: 2618

occurring at a given time from the noise source on a channel (col. 5, lines 33-34 and line 47-48 and lines 20-21, not performing transmit and receive period). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the probability of Hess into the system of Carlson to mitigate interference when the determination of interference is unsure.

Regarding claim 5, Carlson as modified teaches delaying the transmission as claimed (not transmitting during noise is on, col. 4, lines 11-13 of Carlson).

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, the prior art of record fails to teach or suggest the step of receiving as claimed.

Response to Arguments

Applicant's arguments with respect to claims 1-2, 4-7, 9-14, 31-42 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on FIRST FRIDAY OFF.

Art Unit: 2618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDERSON D. MATTHEW can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LEE NGUYEN
PRIMARY EXAMINER 1/11/07